VMD SERIES

1 Watt DC/DC Converter
Dual Isolated Output
1000 VDC Isolation

vitec dc conversion

FEATURES AND APPLICATIONS

- 7 Pin SIL or 14 Pin DIL Package
- Low Ripple and Noise
- 1000 VDC Isolation
- Cost Effective; RoHS ✓
- Mobile Applications
- Portable Equipments
- Telecommunication Instruments
- Mixed Analog / Digital Subsystems

GENERAL DESCRIPTION

The VMD series is a family of cost effective 1 W dual isolated output DC-DC converters with 1kVDC isolation. These converters achieve low cost and miniature SIL or DIL size without compromising performance or field reliability.
Models operate from an input bus voltage of 5, 12, 24 and 48 VDC offering output voltage levels of 5 & 5V, 5 & 12V and 5 & 15V.

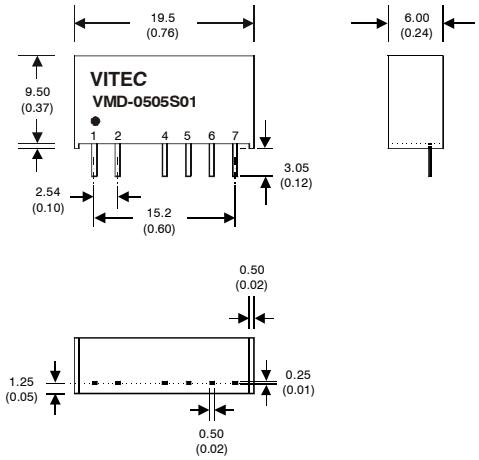
SIL 7 Package – Standard Types					
Type Number	Input Voltage [VDC]	Output Voltage [VDC]		Output Current [mA]	
VMD-xx05S01	5 12 24 48	5,0	5,0	100	100
VMD-xx12S01		5,0	12,0	100	42
VMD-xx15S01		5,0	15,0	100	33

DIL 14 Package – Standard Types					
Type Number	Input Voltage [VDC]	Output Voltage [VDC]		Output Current [VDC]	
VMD-xx05D01	5 12 24 48	5,0	5,0	100	100
VMD-xx12D01		5,0	12,0	100	42
VMD-xx15D01		5,0	15,0	100	33

xx **input voltage (05, 12, 24, 48)**

SIL 7 Package

Standard Isolation	
Pin	Dual Isolated Output
1	+V Input
2	-V Input
4	+V1 Output
5	-V1 Output
6	+V2 Output
7	-V2 Output



V i t e c POWER GmbH
Hans Kudlich Gasse 12/3, A-2230 Gänserndorf, Austria, Tel.: +43/2282/3144, Fax.: +43/2282/60494, Email: office@vitecpower.com
www.vitecpower.com

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ELECTRICAL SPECIFICATIONS

Specifications typical at +25°C, nominal Input voltage, rated output current unless otherwise specified.

Input Specifications

Voltage Range	±10%
Filter	Capacitors

Isolation Specification

Rated Voltage	1000 VDC, Standard
Leakage Current	1 x 10^{-6} A
Resistance	10^{9} Ω
Capacitance	60 pF, typ.

Note: For Vin 48V add an input-capacitor
Cx = 4.7µF ~ 47µF

Output Specifications

Voltage Accuracy	±5%, max.
Voltage Balance (Dual Outp.)	±1%
Ripple and Noise (20 MHz BW)	75 mVp-p, max.
Short Circuit Protection	Momentary
Line Voltage Regulation	±1.2% / 1.0% of Vin
Load Voltage Regulation	±8%, Load=20~100%
Temperature Coefficient	±0.02%/°C

General Specifications

Efficiency	70% to 80%
Switching Frequency	125 KHz, typ.

Environmental Specification

Operating Temperature	-40°C to +85°C
Max. Case Temperature	+100°C
Storage Temperature	-40°C to +125°C
Derating	None required
Humidity	max. 90%, non-condensing
Cooling	Free-air convection

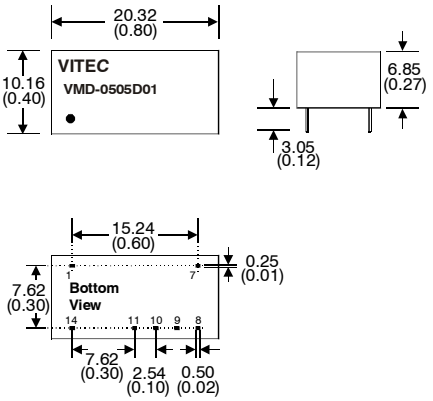
Physical Characteristics

Dimension SIP	19.50 x 6.00 x 9.50 mm
	0.76 x 0.24 x 0.37 inches
Dimension DIP	20.32 x 10.16 x 6.85 mm
	0.80 x 0.40 x 0.27 inches
Weight	2 g
Case Material	Non-conductive plastic

DIL 14 Package

Standard Isolation	
Pin	Dual Isolated Output
1	-V Input
7	NC
8	-V2 Output
9	+V2 Output
10	-V1 Output
11	+V1 Output
14	+V Input

NC…not connected



Notes:
All dimensions in millimeters (inches).
Tolerance ±0.25mm (0.01).
Specifications can be changed without prior notice.
Products are not intended for and must not be used in life support systems, human implantation, nuclear facilities or systems or any other application where product failure or malfunction of the component could lead to loss of life or catastrophic property damage

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